United States
Department of
Agriculture

Soil
Conservation
Service

Boise,
Idaho

Idaho
Water Supply Outlook

June 1, 1986

Foreward

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Idaho
Water Supply Outlook

and

Federal — State — Private
Cooperative Snow Surveys

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GENERAL OUTLOOK

SUMMARY:

RAPID SNOWMELT IN LATE MAY FORCED MANY STREAMS IN CENTRAL AND EASTERN IDAHO TO REACH FLOOD STAGE NEAR JUNE 1. MOST STREAMS, HOWEVER, HAVE NOW PEAKED AND ARE BEGINNING TO RECEDE. WINTER SNOWPACKS ARE VIRTUALLY DEPLETED IN NORTHERN AND EXTREME SOUTHERN IDAHO. NEAR OR ABOVE NORMAL SNOWPACKS REMAIN IN THE HIGH ELEVATIONS OF CENTRAL AND EASTERN IDAHO. MIDDLE AND LOWER ELEVATION SNOWPACKS IN THESE AREAS ARE MOSTLY DEPLETED. MOST RESERVOIRS ARE NOW FILLED OR NEARLY FILLED TO CAPACITY AND IRRIGATION WATER SUPPLIES SHOULD BE GOOD THROUGHOUT MOST OF THE STATE. MID AND LATE SUMMER FLOWS, HOWEVER, COULD BE LOW ON STREAMS WITHOUT STORAGE FACILITIES IN NORTHERN AND EXTREME SOUTHERN IDAHO DUE TO THE EARLY SNOWMELT.

SNOWPACK:

Snowmelt in Idaho was delayed the first half of May as a result of the cooler temperatures that blanketed the state. Above normal temperatures the last half of the month, however, resulted in extremely high melt rates of 2 to 3 inches of snow water per day near the end of the month. Snow measurements taken at a limited number of sites near the first of June indicated northern Idaho's snowpack is nearly depleted with only 40 to 60% of normal packs remaining above the 6000 ft. level. In the central part of the state, little or no snow remains below the 6500 ft. level, but sites above this elevation reported above normal readings for June 1. Readings from the eastern and southeastern part of the state indicate little snow remains below the 7000. ft level, while higher elevations continue to report above to well above normal snowpack conditions for the first of June. The snow line in the southern and southwestern part of the state has moved above the 8000 ft. elevation.

PRECIPITATION:

Two extremes occurred during May, it was either cold or hot with little in between. Record temperatures were set on both ends of the scale. The first week of May brought mild and wet weather. Temperatures averaged well below normal with Boise averaging 13 to 15 degrees below normal. Twin Falls set several record low temperatures. The cool weather abruptly ended during the last week of the month as summer made an early appearance. Temperatures rose into the 90's and in a few place into the low 100's. Many high temperature records were broken across the state. Almost of the rain in May fell during the first three weeks of the month. Amounts varied considerably, but over all, northern Idaho was above normal, central Idaho was well below normal, and the southern third of the state received above normal precipitation. Pocatello reported one of the highest amounts, at 158% of normal. Salmon, on the other hand, received just 41% of their normal rainfall.

RESERVOIRS:

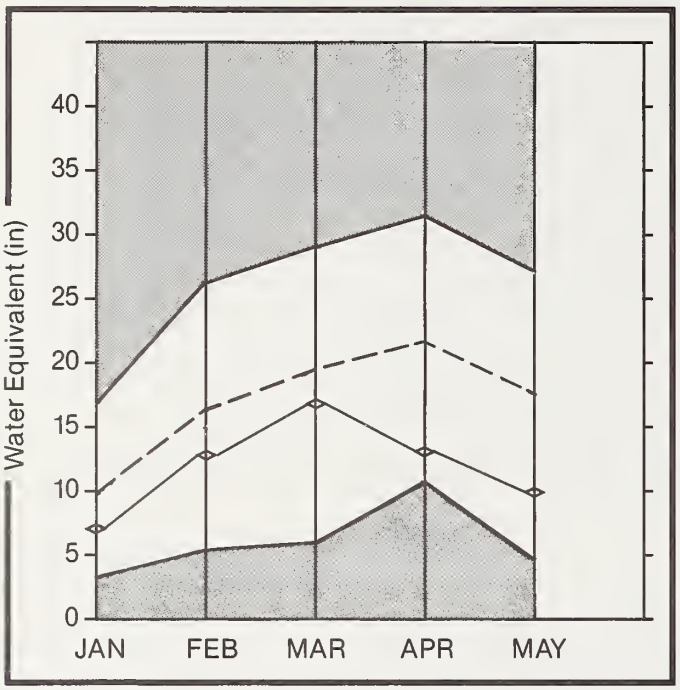
Most reservoirs are now filled or nearly filled to capacity. Of 21 key reservoirs across the state, 12 are reported to be filled with the remainder being over 80% filled. Palisades Reservoir, currently filled to only 48% of capacity, is expected to fill before the end of the runoff period.

STREAMFLOW:

Many streams across the central and eastern part of the state reached flood stage during the last week of May and first week of June as a result of the rapid snowmelt. Most of these streams, however, have now peaked and are beginning to recede. Northern and southwestern Idaho streams reached their snowmelt peaks in April and are receding rapidly as the last of the winter snowpack is depleted. Mid and late summer flows in these areas are expected to be lower than normal. Water users without storage facilities could experience late summer shortages. Elsewhere in the state, the above normal high elevation snowpack should maintain good streamflows through early summer and water supplies are expected to be good for most of the irrigation season.

Upper Columbia Basin

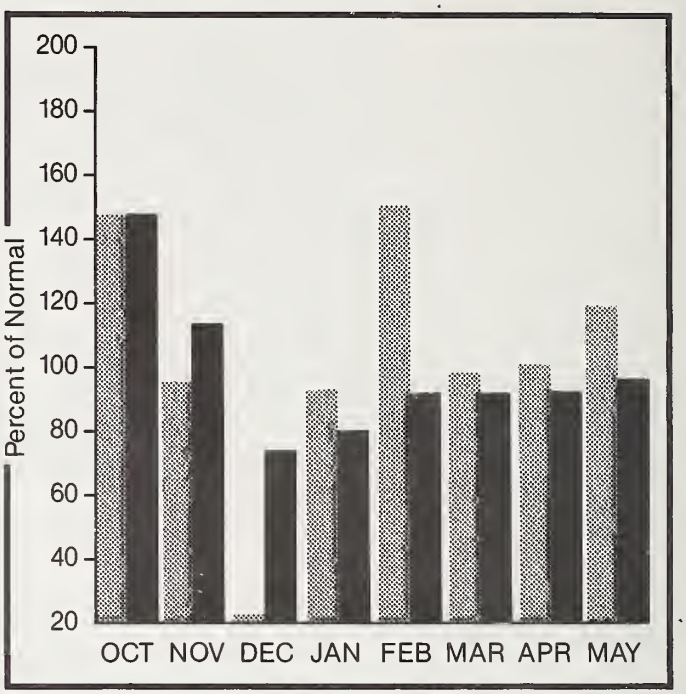
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Average
Minimum
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

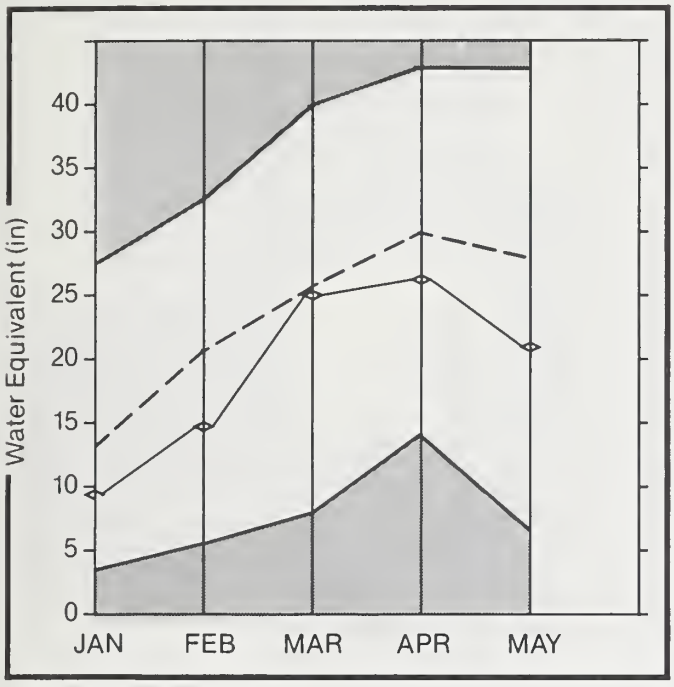
WATER SUPPLY OUTLOOK:

The winter snowpack is now virtually depleted with only a few sites above the 6000 ft. level reporting snow. Peak streamflows occurred in April and streams are nearing low flow conditions. Streamflows for the remainder of the season are expected to remain below normal unless above normal late spring and summer precipitation falls on the basin.

For more information contact your local Soil Conservation Service office.

Clearwater and Salmon River Basin

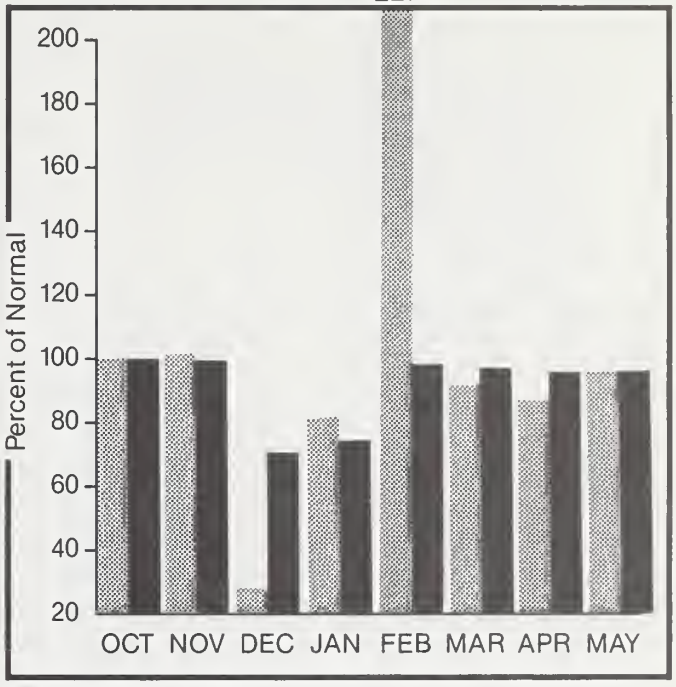
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

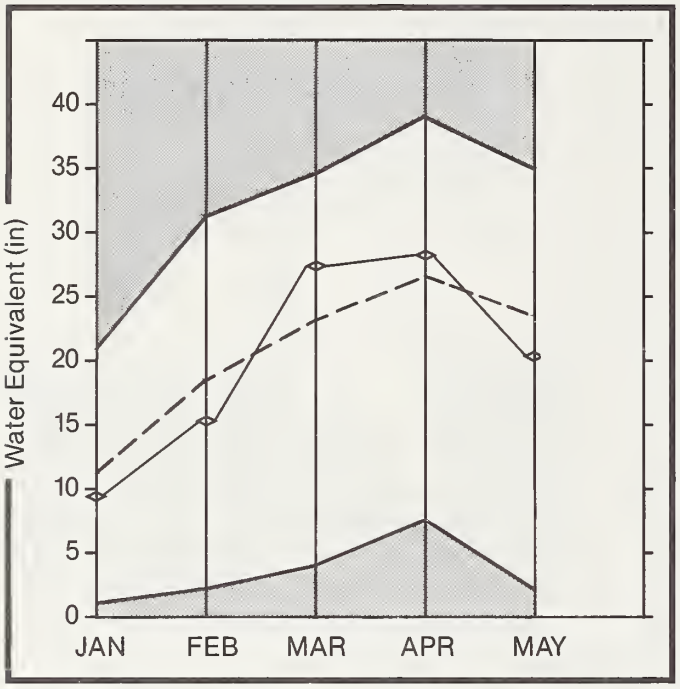
WATER SUPPLY OUTLOOK:

Snowpacks on the Clearwater basin are well depleted with only 40 to 60% of normal snowpack remaining above the 6000 ft. level. Little snow remains below the 6500 ft. level on the Salmon, but higher elevation sites report near or slightly above normal snowpack. Peak flows occurred near June 1 on the Salmon and the Clearwater peaked in April. River floaters can expect low flows on the Clearwater tributaries by late June while the Salmon should maintain adequate flows through early July.

For more information contact your local Soil Conservation Service office.

Weiser, Payette, and Boise River Basin

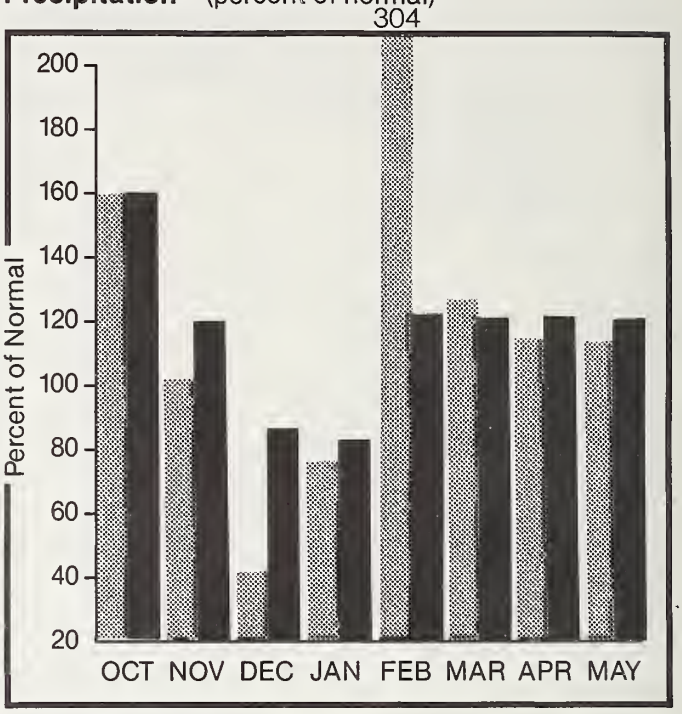
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

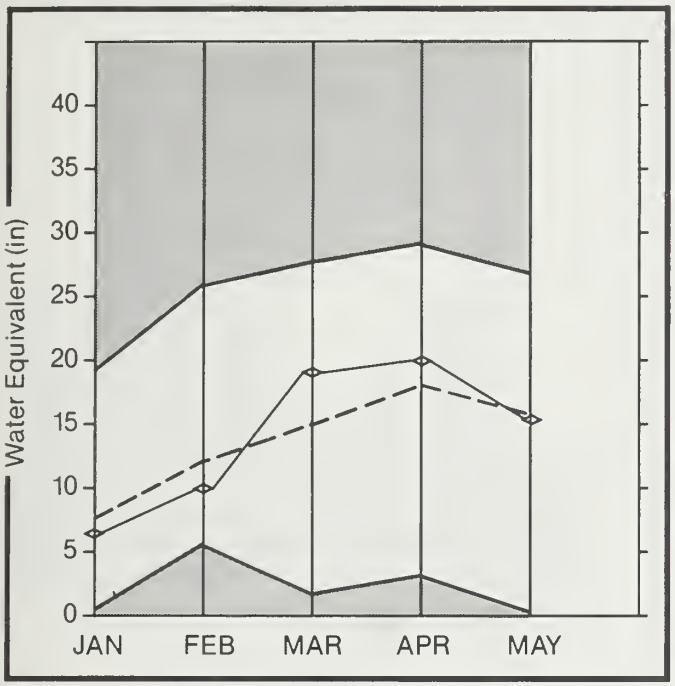
WATER SUPPLY OUTLOOK:

Snowpacks above 6500 ft. elevation generally remain above to well above normal for the first of June, while lower elevations report little or no remaining snow. Major tributaries to the Payette and Boise Rivers reached their snowmelt peaks near June 1 and the Weiser River peaked in April. All major reservoirs are full or expected to fill before the end of the runoff season and good water supplies can be anticipated for the summer irrigation season.

For more information contact your local Soil Conservation Service office.

Big Wood, Little Wood, Big Lost, and Little Lost River Basin

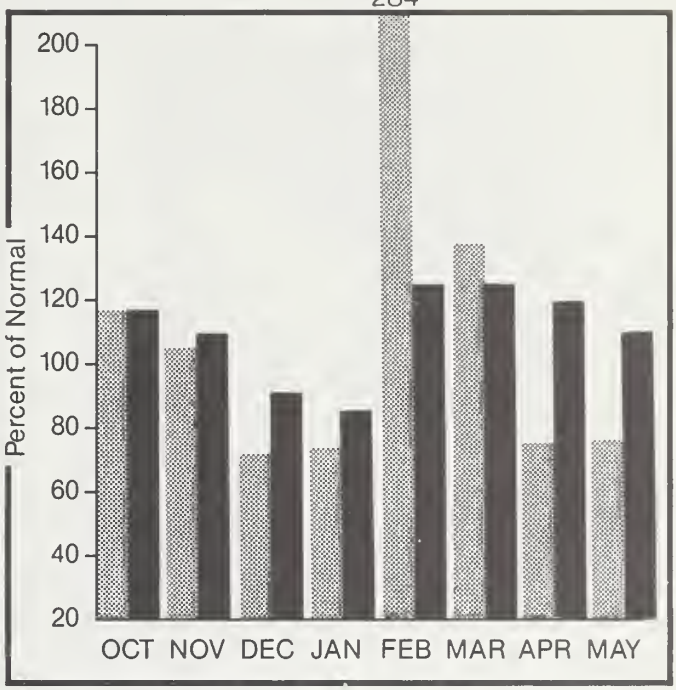
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

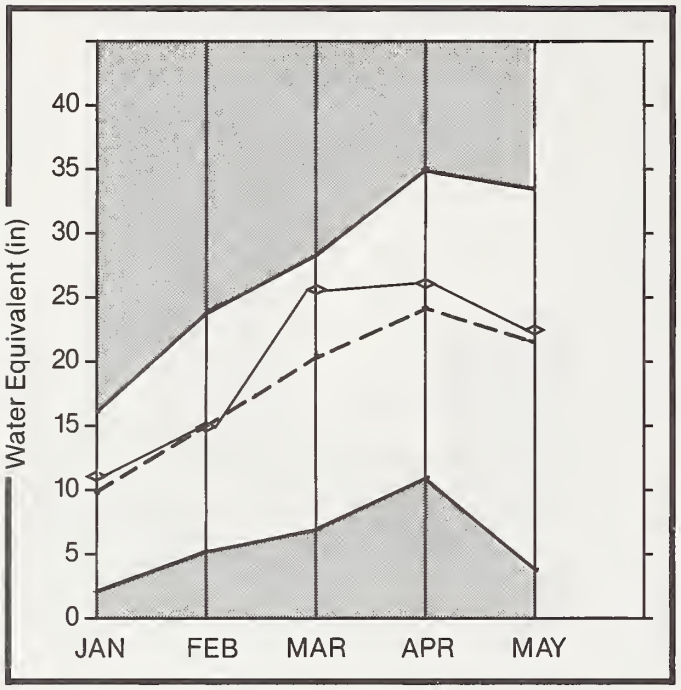
WATER SUPPLY OUTLOOK:

Above to well above normal snowpack for June 1 remains in the higher elevations above 7000 ft. Lower elevation snowpacks, however, have been depleted with the warm temperatures near the end of May. Snowpack on the Little Wood basin is nearly gone. All major reservoirs within these basins have filled to capacity and water supplies are expected to be good for most basins through the remainder of the irrigation season. However, late summer flows may be low on the Little Lost where no storage facilities exist.

For more information contact your local Soil Conservation Service office.

Willow Creek, Blackfoot, Upper Snake, and Portneuf River Basin

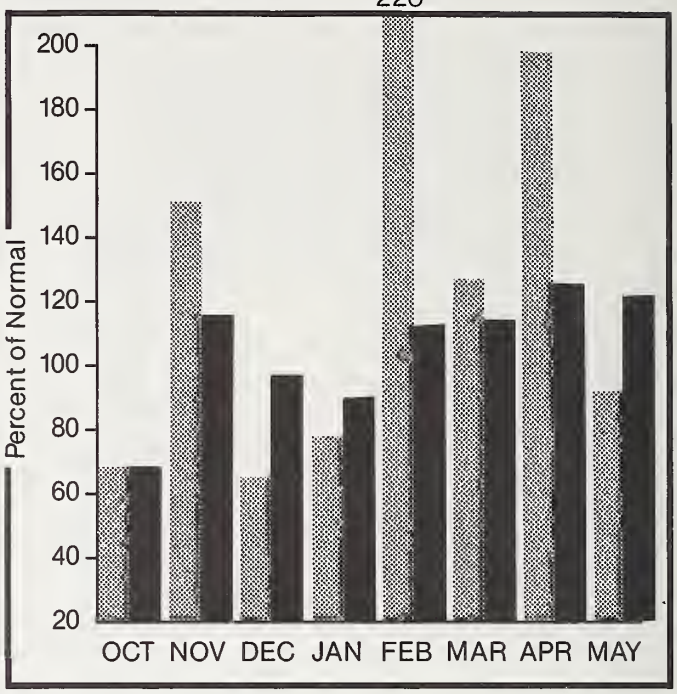
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

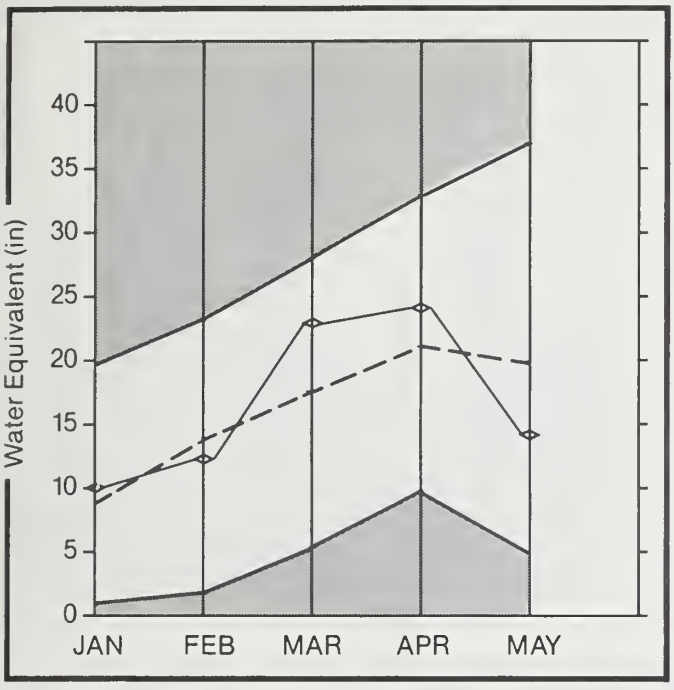
WATER SUPPLY OUTLOOK:

Little or no snowpack remains on the Willow Creek, Blackfoot, and Portneuf basins. The Henry's Fork, Teton, and Upper Snake basins in Wyoming have above to well above normal snowpacks remaining above the 7000 ft. level. Snowpacks below this elevation are mostly depleted. Streamflow snowmelt peaks occurred near June 1 on the Henry's Fork, Teton, and Upper Snake basins. Water supplies are expected to be good throughout the basin.

For more information contact your local Soil Conservation Service office.

Southside Snake River Basin

Mountain snowpack* (inches)



*Based on selected stations

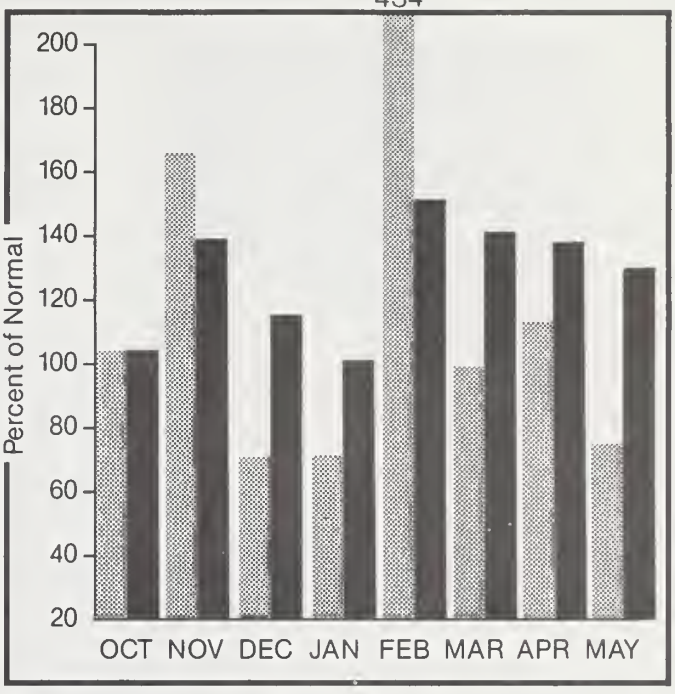
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

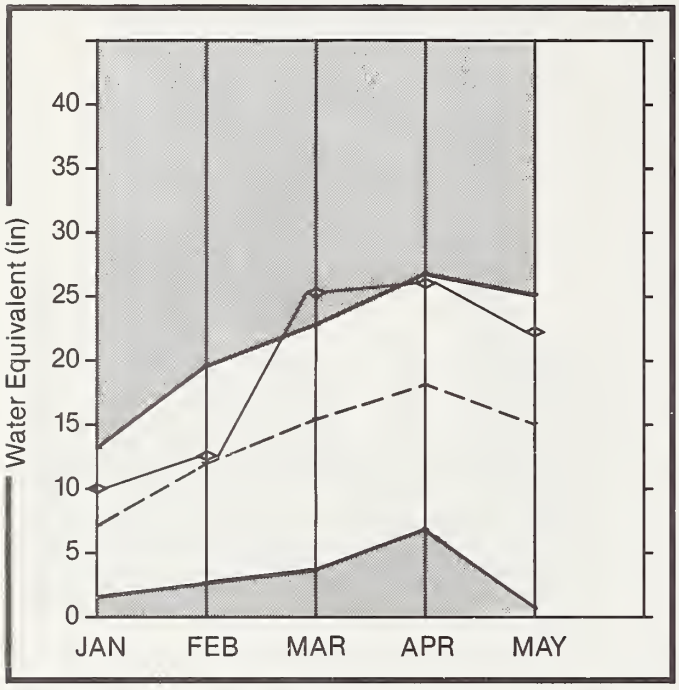
WATER SUPPLY OUTLOOK:

Snowpacks throughout extreme southern and southwestern Idaho are well depleted with only patchy snow remaining above the 8000 ft. elevation. Most streams peaked in March or April and flows are now dropping off rapidly. Mid and late summer flows are expected to be lower than normal.

For more information contact your local Soil Conservation Service office.

Great Basin

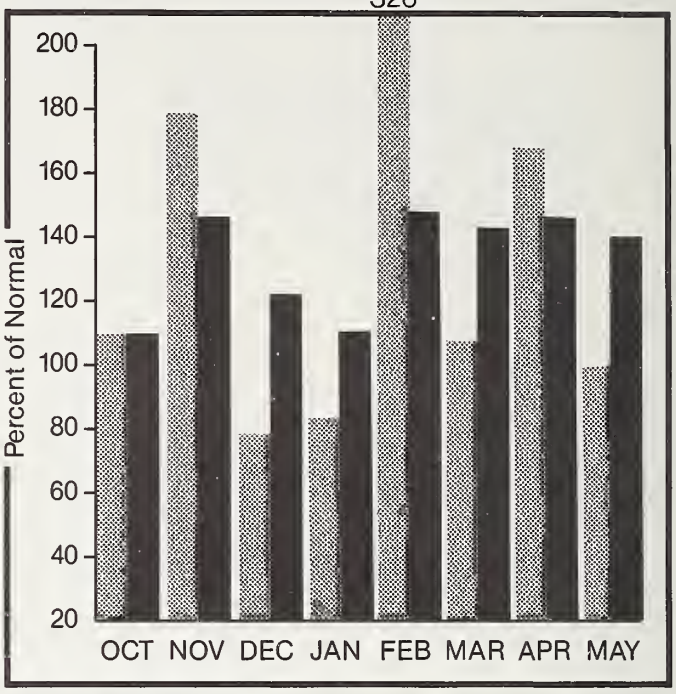
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK:

Rapid snowmelt in late May caused many streams to reach flood stage by June 1. Most streams have now peaked and are beginning to recede. Little or no snow remains below the 7000 ft. elevation. Snowpacks remaining above this level are above or well above normal and water supplies should be good throughout the remainder of the irrigation season.

For more information contact your local Soil Conservation Service office.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State

Idaho Department of Water Resources
Oregon State Engineer and Corps of State Watermasters
Soil and Water Conservation Districts of Idaho

Federal

U.S. Department of Agriculture
Forest Service
U.S. Department of Army
Corps of Engineers
U.S. Department of Commerce
NOAA, National Weather Service
U.S. Department of Interior
Bureau of Reclamation
Geological Survey, Water Resources Division
Shoshone-Bannock Tribal Council

Local

Big Lost River Irrigation District
Big Wood Irrigation Company
Boise Project Board of Control
Idaho Water District #01
Lewiston Orchards Irrigation District
Little Wood River Irrigation District
North Board of Control — Owyhee Project
Salmon Falls Creek Irrigation Company
South Board of Control — Owyhee Project

Private

Cyprus Mining Company
FMC Corporation
Idaho Power Company
Le Bois Resort
Washington Water Power Company

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

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